

Claim Listing

1. (Cancelled)
2. (Previously presented) A message router system as recited in Claim 3, further comprising a system manager that tracks activity states of embedded devices on the data network to determine whether the embedded devices are able to receive messages.
3. (Previously presented) A message router system for a server system that communicates with embedded devices over a data network, the router system comprising:
 - a router coupled to a message store;
 - a queue manager queuing messages from one or more server processes that are destined for a plurality of embedded devices, each of the messages being addressed to one of the embedded devices in the plurality of embedded devices with a unique identifier, the unique identifier being independent of any communication protocol;
 - the queue manager establishing a connection with the router and transferring the queued messages to the router;
 - for each message, the router determining a destination address according to a communication protocol by a database lookup using the unique identifier of the embedded device;
 - for each message, the router transmitting the message directly to the destination address of the embedded device over the data network regardless of whether the embedded device is active on the data network;
 - the router waiting for acknowledgment of the messages from the plurality of embedded devices; and
 - the router storing unacknowledged messages in the message store until corresponding ones of the plurality of embedded devices can accept the unacknowledged messages.

4. (Previously presented) A message router system as recited in Claim 2, wherein the router retrieves one or more of the unacknowledged messages from the message store when the system manager indicates that an embedded device to which the one or more unacknowledged messages are addressed is able to accept the one or more unacknowledged messages.
5. (Previously presented) A message router system as recited in Claim 3, further comprising a bulk data transfer manager for transferring bulk data between the server system and the embedded devices.
6. (Previously presented) A message router system as recited in Claim 5, wherein the bulk data are transferred to the embedded devices by the router sending the embedded devices a message to download a file and a location of the file, the embedded devices contacting the bulk data transfer manager to obtain the file.
7. (Original) A message router system as recited in Claim 6, wherein the embedded devices directly contact the bulk data transfer manager to obtain the file without sending a message via the router.
8. (Cancelled)
9. (Previously presented) A method as recited in Claim 10, further comprising tracking activity states of embedded devices on the data network to determine whether the embedded devices are able to receive messages.
10. (Previously presented) A method for routing messages from a server system to embedded devices over a data network, the method comprising:
 - queuing messages from one or more server processes that are destined for a plurality of embedded devices, each of the messages being addressed to one of the embedded devices in the plurality of embedded devices with a unique identifier, the unique identifier being independent of any communication protocol;

for each message, determining a destination address according to a communication protocol by a database lookup using the unique identifier of the embedded device;

for each message, transmitting the message directly to the destination address of the embedded device over the data network regardless of whether the embedded device is active on the data network;

waiting for acknowledgment of the messages from the embedded devices; and

storing unacknowledged messages until corresponding ones of the plurality of embedded devices can accept the unacknowledged messages.

11. (Previously presented) A method as recited in Claim 10, further comprising:

detecting whether a previously unavailable embedded device is available to receive messages; and

retrieving stored messages for the embedded device and transferring the messages to the embedded device.

12. (Previously presented) A method as recited in Claim 10, further comprising transferring bulk data from the server system to the embedded devices.

13. (Previously presented) A method as recited in Claim 12, wherein the step of transferring the bulk data comprises:

sending the embedded devices a message to download a file and a location of the file; and the embedded devices contacting a bulk data transfer manager to obtain the file.

14. (Original) A method as recited in Claim 13, further comprising the embedded devices directly contacting the bulk data transfer manager to obtain the file.

15. (Previously presented) The message router system as recited in Claim 3, wherein the messages are control messages directing the embedded devices to download, install, or activate content.

16. (Previously presented) The method as recited in Claim 10, wherein the messages are control messages directing the embedded devices to download, install, or activate content.

17. (Cancelled)

18. (Cancelled)